

REMARKS

Claims 1-6 remain pending after amendment.

Claim Amendments

By this amendment, claims 1 and 4 are amended to recite the limitation "wherein no fiber constitutes a core of the composite cord whereby metallic filaments do not form a sheath around the core." Support for this amendment resides at page 3, lines 19-26 of the specification. Support for new claims 5 and 6 resides at page 3, lines 19-23 of the specification. No new matter is added by this amendment.

Applicants' Invention

Applicants' invention is directed to a composite cord having a $1 \times n$ construction where n is an integer from 3 to 12 with from 2 to 11 metallic filaments and from 1 to 5 polymer fibers having a melting point of from 50 °C to 200 °C twisted together, wherein no fiber constitutes a core of the composite cord whereby metallic filaments do not form a sheath around the core. Preferably, the polymer fiber and metallic filaments are

twisted together at approximately constant pitches and displaced from one another in a longitudinal direction.

Applicants' invention also comprises a tire including the above composite core as a reinforcing element.

Rejection under 35 USC 102(b)

Claims 1, 2 and 4 stand rejected under 35 USC 102(b) as being anticipated by Starinshak U.S. Patent No. 5,279,695. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

In response, the reference is directed to a cord comprised of steel filaments having syndiotactic-1,2-polybutadiene dispersed in the interstices between the steel filaments.

By contrast, applicants' invention is directed to a composite cord having a $1 \times n$ construction where n is an integer from 3 to 12 with from 2 to 11 metallic filaments and from 1 to 5 polymer fibers having a melting point of from 50 °C to 200 °C twisted together, wherein no fiber constitutes a core of the composite cord to prevent the metallic filaments from forming a sheath around the core. In a preferred embodiment, the polymer fiber and metallic filaments are twisted together at

approximately constant pitches and displaced from one another in a longitudinal direction.

Such embodiments are neither disclosed nor suggested by the cited reference. The rejection is without basis and should be withdrawn.

Rejection under 35 USC 103(a)

Claim 3 stands rejected under 35 USC 103(a) as being unpatentable over Starinshak in view of Nakamura WO 85/02210. This rejection respectfully is traversed to the extent deemed to apply to the claims as amended.

The deficiencies of Starinshak are discussed at length above. The additionally cited Nakamura patent does not cure the deficiencies of Starinshak.

Nakamura describes the use of core material that has a lower melting temperature. The reference forms a sheath of metallic filaments around the core, which creates a closed gap between the metallic filaments. The embedding rubber cannot penetrate into the closed gap, which permits water to enter into the gap. Such teachings are contrary to applicants' invention. Further, one of ordinary skill in the art would not arrive at applicants' invention upon combination of the respective

teachings of the two references. Importantly, Starinshak et al requires the use of a rubber material (syndiotactic-1,2-polybutadiene) in the disclosed cables. The use of a non-rubber material such as polyethylene or polypropylene fiber would be inconsistent with the teachings of the reference.

In view of such deficiencies and differences between the claimed invention and the cited prior art, the rejection is without basis and should be withdrawn.

The application is now believed to be in condition for allowance and an early indication of same is earnestly solicited.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact James W. Hellwege (Reg. No. 28,808) at (703) 205-8000 to discuss such matters.

Applicant respectfully petitions under the provisions of 37 CFR 1.136(a) and 1.17 for a one-month extension of time in which to respond to the Examiner's Official Action. The Extension of Time fee in the amount of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____


Joseph A. Kolasch
Reg. No. 22,463

JAK/JWH

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

CLAIM AMENDMENTS WITH MARKINGS TO SHOW CHANGES

1. (Amended) A composite cord having a 1 x n construction [(] where n is an integer from 3 to 12 [)] with from 2 to 11 metallic filaments and from 1 to 5 polymer fibers having a melting point of from 50 °C to 200 °C twisted together, wherein no fiber constitutes a core of the composite cord whereby metallic filaments do not form a sheath around the core.

4. (Amended) A pneumatic tire employing for its reinforcing element a composite cord having a 1 x n construction [(] where n is an integer from 3 to 12 [)] with from 2 to 11 metallic filaments and from 1 to 5 polymer fibers having a melting point of from 50 °C to 200 °C twisted together, wherein no fiber constitutes a core of the composite cord whereby the metallic filaments do not form a sheath around the core.